



# Whitaker Institute Policy Brief Series

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**Cluster:** Innovation and Structural Change

**Theme:** Business, Innovation & Economic Development

**Further Reading:**

Cunningham, J. A., Menter, M., & Wirsching, K. (2019). Entrepreneurial ecosystem governance: A principal investigator-centered governance framework. *Small Business Economics*, 52(2), 545-562.

Cunningham, J. A., O'Reilly, P., O'Kane, C., & Mangematin, V. (2016). Publicly funded principal investigators as transformative agents of public sector entrepreneurship. In *Essays in public sector entrepreneurship* (pp. 67-94). Springer

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**Read More About:** The full project reports

Cunningham, J. A., O'Reilly, P., Hooper, D., Nepelski, D. and Van Roy, V., *The Role of Project Coordinators in European Commission Framework Programme Projects. Results of the Innovation Radar PC Survey in FP R&I Projects*, EUR 30131 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-17304-5, doi:10.2760/709126, JRC120015

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## Advancing Scientific Knowledge: The Strategic Role of Scientists in the Principal Investigator Role

Principal investigators (PIs) are 'scientists who orchestrate new research projects, combine resources and competencies, deepen existing scientific trajectories or shape new ones that are transformative in intent, nature, and outcome that can be exploited for commercial ends and or for societal common good.' Taking on the PI role is a significant career milestone for scientists. Scientists learn the PI role on the job. They receive no formal role preparation to take on this strategic and complex role that advances scientific knowledge and practice. PIs key responsibilities include providing scientific leadership, managing resources, disseminate scientific results and realise impact – economic, technological, societal etc. PIs also fulfil other roles including knowledge and technology transfer agent, research strategist, agent of economic policy, collaboration and value creation role.

### Research Findings

Some key findings of a random survey of PIs based on the [EU Innovation Radar Programme](#) dataset are:

- Problem solving opportunity, scientific opportunities and potential impact on society are the top three personal motivations of scientists to become a PI.
- PI reported high levels of project complexity, a median of 9 partners and 5 countries across projects.
- PIs tend to leave planning of scientific and innovation goals to the wider project consortium.
- PIs consider managing technology transfer and commercialisation activities as most challenging task.
- PIs leading projects delivering high innovation potential outcomes perceived institutional, project and market factors as significantly more important to those projects that delivered low innovation potential outcomes.
- Once funded scientists in the PIs role become task oriented.
- PIs identified collaboration management as the most important influences on delivering successful innovation potential outcomes as measured by the Innovation Radar.

### Policy Implications

The following are key policy recommendations in relation to the PI role for EC Framework Programmes:

- Wider role recognition.
- Tailored professional development is needed to prepare scientists for the PI role.
- Enhanced local institutional support for PIs to realise impact in particular technology transfer.
- Need to increase female participation in EC Framework programmes.
- Include innovation potential assessment as part of EU Framework programmes.
- Evaluation criteria reconfiguration to take greater account of the role of the PI and the institutional context are included for evaluation purposes.